

RESPONSES TO USEPA COMMENTS
Feasibility Study Report
VB/I-70 Superfund Site
Operable Unit 2

April 2010

1. Soil samples were taken from the Pepsi Bottling Group on January 2010. Please clarify if the data was incorporated into this draft report?

The subject data were not incorporated into the report as prior to receipt of USEPA's comments on the April 2010 Feasibility Study (FS) report, Engineering Management Support, Inc. (EMSI) was unaware that these data had been collected. To date, the subject data have not been provided to EMSI and therefore are not included in the FS report.

2. Table of Contents (TOC), 3.4: page number 12 is in the wrong place.

The formatting of the TOC will be corrected in the final report.

3. TOC, 4.3 and 4.4: should be header level 3, not level 2.

The header level of Alternatives 3 and 4 will be corrected in the final report.

4. TOC, 5.2.1.4, 5.2.2.4, 5.2.3.4, 5.2.4.4: Change "and" to "or".

These changes will be incorporated in the final report.

5. TOC, 6.1.1.1 and 6.1.1.2: should be header level 3, not level 4.

The header levels will be corrected in the final report.

6. TOC, List of Figures, Figures 4C, 5A, 5B, 5C, and 9: TOC does not match figure title.

The figure titles in the TOC are correct. The titles of these figures will be corrected in the final report.

7. TOC, Appendix A, Figure A-5: (0 to 5 ft) should be (5 to 10 ft).

The figure title in the TOC will be corrected in the final report.

8. TOC, Appendix A, Figure A-6: (0 to 5 ft) should be (10ft and greater).

The figure title in the TOC will be corrected in the final report.

9. List of Acronyms: "UOA" should be "UAO".

The List of Acronyms will be corrected in the final report.

10. List of Acronyms: "ug" should be "µg".

The List of Acronyms will be corrected in the final report.

11. Page 1, Section 1, paragraph 4, first sentence: "heath" should be "health".

The spelling will be corrected in the final report.

12. Page 4, Section 2.1, last paragraph: The reference "USEPA, 1998" refers to two entries in the reference section.

The referenced call-out in Section 2.1 will be changed in the final report to "USEPA, 1998a", which will reference: *USEPA, 1998a, Sampling Analysis Report – Phase I Sampling for Removal Site Assessment, Vazquez Boulevard/Interstate 70 Site, July 6.*

13. Page 4, Section 2.1, last paragraph, sent. 4: Add "a" to " ... groundwater was not a significant. .. "

The addition will be made in the final report.

14. Page 4, Section 2.1, last paragraph, sent. 5: Remove from Site to the end of the sentence.

The words will be removed in the final report.

15. Page 4, Section 2.2, sent. 3: Remove "Therefore."

The word will be removed in the final report.

16. Page 7, Section 2.4 paragraph 3 indicates that the HHRA indicates the "Ingestion of surface soil containing arsenic, manganese, and thallium was identified as a potential concern for future residents. Exposure to lead in soil was identified as a potential concern for a future child resident in residential exposure units R1, R2, and R3." Later in Section 5.2.4.5 page 45 paragraph 2 it states that "Implementation of ICs to restrict residential use at the Site would limit or prevent exposure of potential future residential users to lead and arsenic in residential exposure units RI, R2, and R3 (all areas of the OU except the south half of the Denver Coliseum parking lot); and metals in residential exposure unit R2." Explain why arsenic was included in EU RI, R2, and R3 in Section 5.2.4.5 but is not included in EU RI, R2, and R3 in Section 2.4? If arsenic should be included in RI, R2, and R3 then clarify that in Section 2.4.

Ingestion of surface soil containing arsenic, manganese and thallium was only identified as a potential concern for future residents in exposure unit (EU) 2. The text in sections 2.4 and 5.2.4.5 will be modified to clarify that potential ingestion of soil containing these trace metals is only a concern for potential future residents in EU-2.

17. Page 7, Section 2.4, paragraph 4: Describe locations of residential exposure units RI and R3, and provide a figure for units RI through R3.

The following text will be added after the third sentence of the first paragraph of Section 2.4: *"Residential exposure unit R-1 includes the current Pepsi Bottling Company property located in the southeastern portion of OU-2 (Figure 6). Residential exposure unit R-2 includes the business located along Brighton Boulevard and the Forney Transportation Museum property in the northeastern portion of OU-2 (Figure 6). Residential exposure units R-3 and R-4 include the northern and southern portions of the Denver Coliseum property, respectively (Figure 6)."* Figure 6 will be revised to include both the residential and the commercial exposure units.

18. Page 8, Section 2.5, last paragraph: There is no "USEPA, 2002b" reference in Section 7.

The call-out to reference "USEPA, 2002b" will be changed in the text of the final report to "USEPA, 2002".

19. Page 9, Section 3.2, sent. 3 and 4: Change "State" to lowercase.

The change will be made in the text of the final report.

20. Page 10, Section 3.3: "EPA, 2009" should be "USEPA, 2009a" or "USEPA Region 8, 2009a".

The call-out to the reference will be changed to "USEPA Region 8, 2009a" in the text of the final report.

21. Page 11, Section 3.3, paragraph 3, sent. 1: Change "The" to "This."

The change will be made in the text of the final report.

22. Page 12, Section 3.3, last paragraph: Thiessen polygons are displayed on Figures A-7 through A-9, not A-1 through A-9 as discussed in this section.

The change will be made in the text of the final report.

23. Page 12, Section 3.4.1, sent. 4: Remove "the" from " ... that pass *the* both the ... "

The change will be made in the text of the final report.

24. Page 14, Section 3.4.3, first paragraph: "USEPA, 1999" should be "USEPA, 1999b".

The change will be made in the text of the final report.

25. Page 19, Section 4.2.2, last paragraph, first sentence: Sentence is unclear.

The words "would be developed, applied, and maintained" will be added to the end of the sentence in the text of the final report.

26. Page 19, Section 4.2.2.1: "BOU" is not defined.

"BOU" in the text of the final report will be replaced with "VB/I-70 OU-2 Site".

27. Page 20, paragraph I, sent. 2 and 3: Change the end of sentence 2 to " ... of the Colorado Environmental Covenants law." Remove sentence 3. The environmental covenants are enforceable and an easement is not needed.

The changes will be made in the text of the final report.

28. Page 20, Section 4.2.2.3, sent. I: A Unilateral Administrative Order (UAO) on Consent doesn't make sense; Unilateral and Consent don't go together.

The words "on Consent" will be removed in the text of the final report.

29. Page 20, Section 4.2.2.4, paragraph 2, first sentence: Add "database of the "before "Utility ... ".

The words will be added to the text of the final report.

30. Page 20, Section 4.2.2.4, paragraph 2, second sentence: Modify to read "Listing on Utility Notification Center of Colorado database will provide a mechanism to notify potential contractors of the presence of contamination, and the restrictions and requirements for excavation at the site, and also provide a mechanism ... ".

The changes will be made in the text of the final report.

31. Page 21, Section 4.2.2.6, paragraph 1, sent. 1: Change the beginning of the sentence to "EPA recommends that ICs be layered... "

The change will be made in the text of the final report.

32. Page 21, Section 4.2.2.6: "EPA, 2000" should be "USEPA, 2000a".

The change will be made in the text of the final report.

33. Page 21, Section 4.2.2.6, paragraph 2: It is unlikely that all four types of ICs will be implemented at all properties?

The first sentence of the second paragraph of Section 4.2.2.6 will be changed to read as follows: In the case of OU-2, *one or more of the* four types of ICs (governmental controls, proprietary controls, enforcement tools, and information devices) *may* be developed and applied."

34. Page 21, Section 4.2.2.6, paragraph 2, bullet 2: End the sentence after "risk to humans."

The change will be made in the text of the final report.

35. Page 22, paragraph 1, sent. 5: Change "overly" to "overlay."

The change will be made in the text of the final report.

36. Page 22, paragraph 1, last sent.: Should "would also require" be change to "may also require"? The State will not approve an environmental covenant that requires future undefined remedial action.

The change of the word "would" to "may" will be made in the text of the final report.

37. Page 23, paragraph 2: Would the 8 inches of soil excavated be disposed of off site?

Yes. As shown on the preliminary capital cost estimate for Alternative 3 in Appendix B, costs were included to transport and dispose of the excavated soil.

The following sentence will be added to the text of the final report: *"For purposes of preparing a cost estimate for Alternative 3, it is assumed that the excavated soil would be trucked to the Denver Arapahoe Disposal Site (DADS) permitted disposal facility in Arapahoe County, Colorado, approximately 23 miles from the Site."*

38. Page 23, Section 4.4, paragraph 4: the separate color on Figures A-8 and A-9 that is referred to in this paragraph could not be identified on the figures.

The reference to Figures A-8 and A-9 will be removed from the text of the final report, as the areal samples were only collected of surface soil.

39. Page 28, Section 5.1.2, paragraph 1, last sent.: Change "Appendix A" to "Table 1."

The change will be made in the text of the final report.

40. Page 34, Section 5.2: There are only four remedial alternatives listed, not seven.

The change will be made in the text of the final report.

41. Page 35, Section 5.2.1.2, last sent.: Add " ... and state environmental covenants law would not be met" to the end of the sentence.

The change will be made in the text of the final report.

42. Page 35, last paragraph: Why is the RAO discussion needed in each discussion of short term effectiveness?

The discussion regarding RAOs is included because one of the evaluation criteria under short-term effectiveness is the time until RAOs are achieved.

43. Page 37, Section 5.2.2.3, next to last sentence in Magnitude of residual risk paragraph, "insure" should be "ensure" and "engineering controls" should be "institutional controls."

The changes will be made in the text of the final report.

44. Page 38, Section 5.2.2.6: Do we need to discuss the implementation challenges with each of the types of ICs proposed here?

We believe that the existing text that states "As CCoD has been the only owner of property located within OU-2 that has participated in the development of the RI/FS, it is envisioned that the owners of the other properties within OU-2 may not understand or agree with the need for implementation of ICs. This could present an administrative issue for implementation of ICs." is sufficient, especially given that to-date we are not aware if any discussions have been held with the other property owners or what resulted from such discussions. However, in response to the comment the following text will be added to this discussion: *"Specifically, implementation of governmental controls such as zoning restrictions or proprietary controls such as environmental covenants or environmental easements without the consent of the various property owners may be difficult and could represent a potential "taking" of private property rights. Until discussions are held with the various property owners, the potential implementability of these types of ICs cannot be fully assessed. Implementation of enforcement tools would be the responsibility of USEPA and therefore the implementability of this type of IC is subject to USEPA's discretion. Some information devices such as deed restrictions are also subject to consent by the property owner; however, others such as inclusion of a*

general notification in the comprehensive land use plans for the area can be implemented by CCoD in accordance with CCoD zoning and land development regulations."

45. Page 38, 5227: It would be more convenient if costs figures are placed in the narrative.

Estimated capital, annual OM&M, and 30-year present worth cost figures will be included in the text of the final report for Alternatives 2, 3, and 4 in Sections 5.2.2.7, 5.2.3.7, and 5.2.4.7, respectively.

46. Page 39, Section 5.2.3.1, paragraph 1: What if the building is removed?

The following text will be added to the first paragraph of Section 5.2.3.1: *"The presumption under Alternative 3 is that all buildings would remain in-place. In the event that a building were to be removed, the ICs component of this alternative would require implementation of appropriate remedial actions in conjunction with building demolition in the areas of residual contamination (see Section 4.2.2)."*

47. Page 39, Section 5.2.3.2: What about state environmental covenants?

The following language included in Section 5.2.2.2 relative to state environmental covenants as an ARAR will be added to Section 5.2.3.2 as well as to Section 5.2.4.2: *"ICs would be developed in accordance with the requirements of portions of the Colorado hazardous waste regulations that are pertinent to environmental covenants."*

48. Page 47, Section 6.1, last sent.: Replace "as each" with " ..*the selected* alternative must meet these two criteria.

The change will be made in the text of the final report.

49. Page 47, Section 6.1.1.1, last sent.: Add "components" to sentence: " ... combination of engineering *components* and ICs under Alternatives 3 and 4."

The change will be made in the text of the final report.

50. Page 48, Section 6.2.1.1, sent. 1: Change as follows: " ... Alternative 2; risk of *exposure* would be reduced ... "

The change will be made in the text of the final report.

51. Page 50. First full paragraph, sent. 2: While excavation and disposal would permanently remove the contaminants of concern from the site and reduce toxicity, mobility, and volume of contaminants at the site, it does not treat the soil to reduce/remove the contaminants.

The following language will be added in the final report to the beginning of the second sentence in this paragraph: *"Although excavation and disposal of soil would not reduce the toxicity, mobility, or volume of the metals in soils through treatment,"*

52. Page 50, Section 6.2.3, paragraph 5: Time to achieve response objectives is stated as six months which does not agree with the one year time frame stated in Section 5.2.2.5.

In the final report, this paragraph will be modified to read: *"With respect to the time until response objectives would be achieved, it is estimated that it would take approximately one-year to prepare the IC plan and to develop and implement additional ICs (Alternative 2); approximately one year to prepare the various planning and remedial design documents and implement the crack sealing, sealcoating, and asphalt paving components of Alternative 3; and approximately one to two years to implement the soil excavation/disposal components of Alternative 4. The ICs component of Alternatives 3 and 4 would be planned, developed, and implemented concurrently with the other components of these alternatives."*

53. Section 7: There are two "USEPA, 1998" references that should be differentiated.

The references will be differentiated in the final report as follows:

USEPA, 1998a, Sampling Analysis Report – Phase I Sampling for Removal Site Assessment, Vazquez Boulevard/Interstate 70 Site, July 6.

USEPA, 1998b, Draft Reference Manual on Institutional Controls, March.

54. Table 1: The following acronyms should be added to the Acronym List: CFR, CWA, SIP, TCLP (and defined), L, m3, NESHAPs (and defined), and CCR.

The List of Acronyms in the final report will be updated to include these acronyms.

55. Table 1, page 1, National Ambient Air Quality Standards: Change Potentially Relevant and Appropriate to "No." Delete the last sentence of the Comment and add:

"See Colorado Air Pollution Prevention and Control Act concerning the applicability of requirements implemented through the SIP. NAAQS are implemented through the SIP.

The changes will be made in Table 1 of the final report.

56. Table 1, page 1, Colorado Soil Evaluation Values: Remove from ARARs.

The CSEVs will be removed from Table 1.

57. Table 1, page 2, Endangered Species Act: Will the potential presence of endangered species be analyzed?

No. The second sentence under the comment section will be deleted.

58. Table 1, page 3, Hazardous Materials Transportation Regulations: This would only be applicable in there is *on-site* transportation of contaminated materials on public streets. If this is only off-site transportation, it is not an ARAR.

The comment section will be modified to include the following at the end of the first sentence: "*and to any alternatives that include on-site transportation of contaminated soil on public streets.*"

59. Table 1, page 3, State of Colorado Hazardous and Solid Waste: In the Comment section, each of these should have 'on site' added as the last word in the sentence.

Per a discussion with EPA, no change is required as regulations requiring identification and classification of excavated soil as a possible hazardous waste would apply to both on-site and off-site activities.

60. Table 1, page 4, Item 6: In the Comment section, this would not be an ARAR if the transportation is mainly off site.

The off-site qualifier will be added to the Comments section for this entry.

61. Table 1, page 5, Item 10: Since Regulation only deals with stationary sources, this standard is potentially relevant and appropriate.

As we don't believe that any of the activities envisioned as part of any of the alternatives would meet the definition of one of the standard industrial groups that are the subject of the standards for stationary sources and therefore do not believe that these regulations would be applicable to the potential remedial alternatives for OU-2. The language of the Comment section will be modified to the following as a new first sentence *"Activities envisioned to be conducted as part of the potential remedial alternatives are not part of any standard industrial code and therefore do not meet the definition of a stationary source."*

62. Table 1, page 6, Item 12: Is this item referring to hazardous waste as in the first column or hazardous substances as shown in the Description column? Is this primarily an off-site issue?

The text of the comment section will be modified to read as follows: *"Potentially applicable to alternatives that include off-site transportation of contaminated soil or on-site transportation on public streets."*

63. Table 2, Item 2-Institutional Controls: In the 30-year Present Worth Costs (\$), how did you come up with the costs and did you do any breakdown of costs for the 4 different types of ICs?

Estimated capital costs to prepare an ICs plan and develop and implement the ICs and estimated annual monitoring costs for the ICs are included in Appendix B on page 1 of 2 of the cost estimate for Alternative 2.

64. Table 3: The following acronym should be added to the Acronym List: CAPPICA (and defined).

The List of Acronyms in the final report will be updated to include this acronym.

65. Figures 1 and 2: Label 1-70 and 1-25 if the site location is going to describe with these features.

The figures in the final report will include the labeling.

66. Figure 7: "XXX" in screening comments is unclear.

The words "*including XXX*" will be removed from the figure in the final report.

67. Figure 8: Should the left column heading be Soil instead of Groundwater?

Yes. Figure 8 will be corrected in the final report.

68. Figure 10: Add "sqft" to acronym list or define on figure.

"sq ft" will be added to the List of Acronyms in the final report.

69. Figures 4A-C and 5A-C: Remove sample location symbols and concentrations from each figure that are not greater than the limit stated on the figure. This should reduce confusion and promote ease of locating areas of contamination that are being described. See Figure A-7 for example.

Figures 4A-C and 5A-C are intended to provide all of the arsenic and lead data at the various depths, while Figures A-7, -8, and -9 in Appendix A are intended to only show those data with arsenic concentrations above 70 mg/kg and lead concentrations above 800 mg/kg.

70. Figures A-1 through A-9: Analytical results are not supported by RI Appendix A data table (e.g., the "U" qualifier on the 4 ft arsenic sample from 8B-B8-33 is not listed on the data table for that sample).

The figures are correct and contain the same data results as the equivalent figures that were included in the RI report. Upon further review it was determined that the data qualifiers for the soil samples obtained along Brighton Boulevard and from Globeville Landing Park were inadvertently omitted in Appendix A to the RI. A revised data table for RI Appendix A is attached to these Responses to Comments.

71. Figure A-1 through A-6: The 800 mg/kg limit for lead and the 70 mg/kg limit for arsenic should be "Action Level" not "background limit".

Corrected figures will be included in the final report.

72. Figure A-3: Each sample location has multiple overlaying labels.

Corrected Figure A-3 will be included in the final report.

73. Figure A-4: Sample location labels are too close together which makes it difficult to associate a label to the correct location. There are numbers with the same label style as the point locations that could be area concentrations, but their format is not defined in the legend. So, it is unclear as to what those numbers represent.

Corrected Figure A-4 will be included in the final report.

74. Figure A-5: There are areas on the map with hatch patterns that are not defined in the legend.

The hatch patterns will be removed from Figure A-5 as they are only applicable to the surface soil (0-5 ft) soil samples.

75. Figure A-9: The "Yes" and "No" in the legend is unclear as to the meaning.

The "Yes" and "No" designations will be replaced with descriptions of the respective symbols in the revised Figure A-9 included with the final report.

76. Appendix B: The following acronyms should be added to the Acronym List: RD/RA, cy, Lcy, MSF, lf, lin, sq ft, cu yds, max.

These acronyms will be included in the List of Acronyms in the final report.

77. General Comment: It is suggested that either mg/kg or ppm is used throughout the document, not both.

Only mg/kg will be used in the final report.